

### **Abstract**

A DC/DC converter presented herein is capable of operating in both step-up and step-down process of output voltage, lowering the output voltage at high speed at the time of output voltage drop, or raising the output voltage at high speed at the time of output voltage rise, and decreasing generation of power loss at the time of transient response. This DC/DC converter can extend the call time of handy phone. The DC/DC converter comprises a voltage converting circuit connected between the input terminal and output terminal, a fast transient response circuit, a step-up and step-down operation determining circuit, a voltage comparator, and a switch control circuit.